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MANUFACTURE OF THIN FILM TRANSISTOR

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ABSTRACT

PURPOSE: To eliminate crystal defect, impurities, etc., from an element activation region, at the time of manufacturing a thin film transistor.

CONSTITUTION: On an insulative substrate 1, an amorphous silicon film 4 is deposited, thereon an oxide film 5 is formed, a photo resist mask 6 which is patterned and formed on the film 5 is us as a mask, and ions are implanted. Thereby only the amorphous silicon film 4 at the part corresponding to a region 3 where an element is not formed is turned into a high impurity region to forin a gettering layer 7. By laser annealing after the photo resist film 6 is eliminated, the amorphous silicon film 4 is crystallized to form a polycrystalline silicon film. At the same time, crystal defect, impurities, etc., in the amorphous silicon film 4 of the part corresponding to an element formation region 2 are made to be absorbed in a high impurity region 7 around the defect and impurities. After that, the oxide film 5 is eliminated, and the polycrystalline silicon film (the gettering layer 7) in unnecessary parts is eliminated by element isolation. In this state, the polycrystalline silicon film is formed only in the element formation region 2 on the insulative substrate 1.